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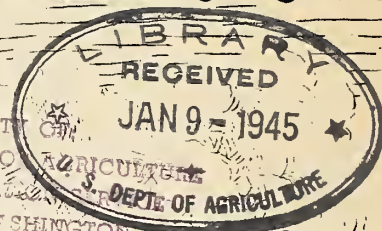
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REGION 3

SECOND QUARTER 1941

OPERATION

PERSONNEL CHANGES

Recent personnel changes are:

Charles T. Fox, formerly clerk on the Lincoln National Forest, to the Tonto National Forest as principal clerk.

Leroy Maddison, formerly in charge of photo reproduction in the Regional Office, to the position on the Lincoln, vacated by Mr. Fox.

Mr. Ernest O. Buhler, who has been connected with the division of State Forestry in our Washington Office, has been assigned to work in Information and Education.

Project Superintendent Charles B. Morrill transferred from F-19-A Prescott to F-11-N on the Gila.

Superintendent Joseph E. Carlton, formerly at F-3-A on the Apache has filled the vacancy on the Prescott.

David L. Killion formerly foreman at F-41-A on the Crook promoted to project superintendent at F-3-A on the Apache.

Associate Forester, W. H. Woods, Jr. from the Cibola to Associate Forester on the Crook.

Perl Charles, formerly Assistant Supervisor on the Santa Fe, to the Cibola to fill the position vacated by Mr. Woods.

Assistant Supervisor, G. L. Wang, recently transferred from the Lincoln to the Carson has moved to the position on the Santa Fe vacated by Mr. Charles.

Forest Ranger Kenneth A. Keeney, formerly in charge of the Penasco district on the Carson promoted to a staff position on the Carson.

David O. Scott, formerly Assistant Ranger on the Kaibab, to District Ranger in charge of the Penasco district on the Carson.

J. A. Egan, formerly on the Saginaw and Manistee Lumber Company Sale on the Kaibab, to the position of assistant ranger, vacated by Mr. Scott.

David Stevens, formerly a technical foreman at F-78-A on the Sitgreaves, transferred to the Saginaw and Manistee Lumber Company Sale.

Francis J. Monighan, formerly Assistant Forest Supervisor on the Sitgreaves to Forest Supervisor on the same forest.

Clifford E. McDuff, formerly Associate Range Examiner on the Crook to the position of Assistant Forest Supervisor on the Sitgreaves.

FIRE REVIEW BOARDS COMPLETE WORK

Three Class E fires occurred during the past year on R-3 National Forests as follows: Turkey Pen No. 2 on the Coconino, Hess Ranch No. 2 on the Sitgreaves and Silver Plume on the Lincoln. In order to secure data on good practices learned in suppression work and to eliminate any weak points that were found, Fire Review Boards met on these forests as follows: Supervisors Grubb and Hussey served on the Coconino Board, Supervisors Winn and Moore on the Lincoln and Supervisors Arthur and Merkle on the Sitgreaves. Robert Munro represented the RO on each board.

FOREST FIRE RECORD 1940

The final Ten-Day report for the period ending December 31, 1940, confirmed previous expectations that 1940 would show a record of outstanding performance in forest fire control. It should be remembered that the early portion of the season seemed to qualify abundantly in the class of outstanding bad years from the national angle. Conditions then turned more favorable, but 1940 is probably as near to a really bad year as has been experienced in a national sense since 1934. Acres lost per million in 1940 were 1,538 against 1,723 for 1939. The 1940 record is not so good as the average for 1935 to 1939, which is 1,224 acres, but the better showing in 1940 than in 1939 seems quite noteworthy.

Total number of fires in 1940 was 17,038 against 15,824 for 1939 and 12,820 for the five-year period 1935-39. This increase in 1940 is all due to lightning fires. The number of man-caused fires in 1940 was only 8,131 against 8,555 for 1939. Perhaps the long awaited down-turn in the number of man-caused fires has actually started.

Despite the better record in 1940 in area burned, the report shows 221 fires of 300 acres or over in 1940 against 160 in 1939 and 97 for each of the three years 1937-39. More fires reached the 300-acre size than ever before since this record has been kept, but fewer went on into the 10 to 30 thousand acre class.

National Forest damage, which for the first time is supposed to include intangible as well as tangible, reached an extremely low total of \$684,298 for 1940. FF expenditures for 1940 total only \$2,995,000 against \$3,280,000 for the corresponding first half of the previous fiscal year.

Altogether it seems that congratulations and commendations are due to countless men from regional officers down to the last guard in the line for good head work, good judgment, and more than the usual degree of skill and fortitude displayed by the organization as a whole.

WO INFORMATION DIGEST

ANNUAL FIRE MEETING

Llew Putsch and Ted Bonner returned March 13 from the Lincoln where they spent three days at the annual fire meeting held near Ruidoso. Leo Beall who was in charge of the program did a good job of keeping scheduled activities moving forward. W. G. Koogler made an illustrated talk on watershed management and his new color slides were praised by the group. The Lincoln group had planned to go into the field and set up a model fire camp and make demonstrations on camp layout, the use of the Edwards portable fire pump, radios and other phases of fire fighting, but a ground cover of snow and cold weather prevented outside training activities. These points were covered by talks, demonstrations, and blackboard illustrations by Bob Munro, Charles Sutton, Tom Buchanan and Doug Redding. Bonner led a discussion on safety and the handling of CCC enrollees on fire.

Llew Putsch reported high interest and splendid cooperation from forest officers on the Carson, Lincoln and Coronado where the series of aptitude tests were given.

SKULL VALLEY DISTRICT CHANGES NAME

In accordance with the recommendation submitted by Supervisor Nave, the Skull Valley Ranger District on the Prescott Forest will hereafter officially be "Walnut Creek Ranger District."

CHAMA DISTRICT HAS "COURAGE OF ITS CONVICTIONS"

The Santa Fe forest relays this comment from District Ranger W. L. Graves:

"We are rather proud of our fire record on the Chama District, for the 1940 season. Out of 28 fires only two were man-caused. One of these was a pre-season fire which started from a burning house and was put out by private individuals at their own expense. This case was not prosecuted as it was felt the man responsible for starting it had paid enough penalty by losing his house and all of his household goods. The other man-caused fire was a smoker fire and the guilty party had been found, tried and fined within four hours after the fire was discovered. This gives us a hundred percent record of convictions on man-caused fires.

"It is felt that one of the chief reasons that we had only one man-caused fire is that we had a two day meeting of all per diem guards on the district and were able to put across the idea of preaching fire prevention to their neighbors.

"Our next goal will be no man-caused fires in 1941 (we hope)."

NEW MEXICO COUNCIL OF NATIONAL DEFENSE

A meeting of the New Mexico Council of National Defense held in Santa Fe March 17 was called by the Adjutant General and was attended by law enforcement officers of the State, mayors, police chiefs, fire chiefs, sheriffs, captain of the State Guard, F.B.I. men and Forest Officers, M. M. Cheney and C. W. McKenzie. Emphasis was placed on the danger of sabotage against the state's vital water supplies and the need to organize emergency fire fighting units. Mr. Cheney spoke on the importance of the natural resources of the state and the need of protecting the forest from fire, describing the fire organization of the Service and the cooperation which law enforcement officers and other agencies can render as auxiliary organizations. A copy of the subjects considered and plans outlined has been received and the following is quoted therefrom:

"The forests of New Mexico are one of our most valuable resources. As the National Defense program expands it may become necessary to draw more heavily on New Mexico timber. Adequate protection of forested areas against fires of all types must be planned.

"Under normal circumstances the United States Forest Service does outstanding work in protecting national forest and adjacent forest land. If, however, a large number of fires were set in a wide area during the fire season the man power of the Forest Service, CCC camps, etc., would be inadequate. Further, there are more than 1,000,000 acres of timber in the state not in the national forest, or protected by the Forest Service under cooperative agreement.

"Therefore, it falls upon the State to train additional men in forest fire fighting under the direction of experts from the Forest Service to meet emergency conditions. It is planned to have members of state guard units trained in forest fire fighting under the auspices of the United States Forest Service so that each may direct a group of men in case an auxiliary force is needed."

GILA RANGER MEETINGS

A ranger meeting was held on the Gila Forest on January 30 and 31. The attendance was limited to the ranger force and project superintendents. General administration subjects were covered the first day. The second day was devoted to fire control subjects. Robert Munro represented the fire control office at this meeting.

GIANT FOREST FIRE IN AUSTRALIA

Description of an Australian forest tragedy of 1938-39 that received little publicity in the United States was recently published in an issue of American Forests. Over ten million acres of forest land is reported to have been burned and somewhere around one hundred people burned to death. The native timber in the area burned was principally eucalyptus. It presents a greater fire hazard than stands of pines and other conifers owing to an oil in the leaves that creates a gas under intense heat and then explodes. One forest official reported that he was able to escape along a highway only by rolling up the windows of his car and breaking through the fire. It was reported that other automobiles were trapped by the fire.

A contributing factor to the fires was the high temperatures that prevailed. Along the coast the thermometer registered as high as 114 degrees while it reached 130 degrees further inland.

MEXICO ESTABLISHES FOREST FIRE FIGHTING STATIONS

The December, 1940 issue of the Mexican-American Chamber of Commerce, a Mexico magazine, describes measures being taken by the Mexican Department of Agriculture in combating the forest fire situation in that country as follows:

"A campaign for the control of fires which annually destroy vast expanses of forests in Mexico is being conducted by the Department of Agriculture by means of special agreements with state governments. The state of Chiapas has agreed with the Federal Department to establish in each municipality a fire fighting station. Through the Department of Forests and Hunting, the Department of Agriculture is endeavoring to reach similar agreements with other states of the Republic."

NEW SOUTHWESTERN STATION APPOINTEE

Junior Forester Kenneth A. Brinkman has recently been added to the staff of the Parker Creek branch of the Southwestern Station by transfer from the Southern Forest Experiment Station at New Orleans. Mr. Brinkman is a graduate of Iowa State College, with a Master's degree in Forest Management in 1937. Since March 1938 he has held appointments as Field Assistant and Junior Forester with the Southern Station and was a member of the technical staff of the flood control survey party on the Tallahatchie-Tazoo watershed project in Mississippi. Mr. Brinkman will work under Forest Ecologist B. A. Hendricks in collecting and analyzing data on precipitation, run-off, soil movement, and stream flow in the going research program at Parker Creek.

COLLIER'S PRINTS FEATURE ARTICLE ON PARACHUTISTS

The January 11 issue of COLLIER'S contained a splendid feature article on parachutists entitled "Out of the Blue." The author, Jim Marshall, gives the following credit to the Forest Service:

"The birthplace of parachute fighting in our country wasn't at an Army post or air-service field, but near the little town of Winthrop in the high Cascade Range of northern Washington State, and later in the Bitter Roots near Missoula, Montana. The man who started it wasn't a flier or a soldier; he was David P. Godwin, assistant chief of the Division of Fire Control of the U. S. Forest Service. Godwin wasn't after new methods of attacking human enemies; he was after forest fires."

The author then goes on to describe the experiments made by the Forest Service and the organization of a parachute corps in the Army.

(WO Information Digest)

SIMPSON TO WASHINGTON

Alva A. Simpson, accompanied by Mrs. Simpson and their youngest daughter and Mr. Phelps of Region 6, left January 22 for Washington by auto. Messrs. Simpson and Phelps joined other members of the Allotment Base Revision Committee in order to correlate and complete their report. Mr. Simpson will probably not return until May at the earliest.

FIRE MEETINGS

Bob Munro of the fire control branch returned to the RO March 3, after attending the Indian Service forestry seminar at Phoenix, February 24-28 inclusive, and the Coronado National Forest fire meeting which was held on March 5-8 inclusive at the Santa Rita Range Reserve. At the Indian Service seminar, Merle Gee of our division of Wildlife and Range Management presented a paper on stream improvement and spent one day there. Munro, remaining throughout the seminar, presented a paper on fire tools and equipment, and by request spoke on fire suppression methods.

In a field demonstration, an Indian Service man directed a demonstration of the modified one-lick method (each member of the crew completing two feet of fire line before stepping on). Munro, asked to discuss it in comparison with the established one-lick method, cited several points showing superiority of the established one-lick method.

At the Coronado's fire meeting, the National Park Service was represented by three men, one each from Tumacacori, Saguaro and Chiricahua National Monuments.

TWENTY YEARS AGO

The Daily Bulletins for March, 1921 remind one that the Southwest was experiencing an unusually dry spring at that time. Several forests had fires and fire lookouts were being manned; also due to protracted drought there was an alarming shortage of stock feed in many sections and stock in southern Arizona was being shipped to California. Today the ranges of New Mexico and Arizona have had more moisture than for a number of years and the outlook for spring and summer feed is very favorable; also everything points to a late fire season.

GILA FIRE MEETING

The Gila held its annual Fire Guard Training Camp at Beaverhead on April 8, 9, and 10, with 60 men receiving training amounting to 1,551 man-hours. Six visitors from cooperative Services and two forest officers from the Cibola National Forest, the Gila personnel consisting of 12 men, and the fire guards, per diem guards, etc. were present. The meeting ended with a fire where the various methods of fire control were put in use and the effectiveness of the pumper unit received last year was demonstrated.

THERE IS NOTHING LIKE GETTING AHEAD OF THE SEASON

Ranger Keeney started his fire season with a whoop and a bang January 29. Although he had two feet of snow on his district, he reported a fire on the 26th. It was an abandoned camp fire which had not been properly taken care of and commenced to spread. Keeney apprehended the guilty parties and will now have to include skis as fire tools if he expects to start his fire season in January (Carson Pine Cone)

TIMBER MANAGEMENT

THIRTY-YEAR RECORD OF LUMBER PRODUCTION

The TIMBERMAN for April states that nearly a trillion (1,000 billion) board feet of lumber has been cut from timber from American forest lands since 1909 according to reports of the U. S. lumber industry to the Bureau of the Census and the U. S. Forest Service. Of this the timber stands in the 11 southern states yielded the greatest share, approximately 43%. The forests of the 11 western states, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming contributed the next largest lumber cut with approximately 37%. Between them the South and the West have in the last generation furnished 80% of the nation's entire lumber cut. From 1909 through 1925 the South held undisputed leadership with an average annual share of 46%. In 1926, the West took the lead with 42.9% of that year's lumber, but the South was right behind with 42.2%. From that year onward, the West has retained the lead, contributing 46% of the total cut through 1939, the last year for which complete totals are available.

In 1799 the annual cut was 300 million board feet. By 1839 this had risen to a billion and a half feet. Ten years later, in 1849, the total was over five billion feet. In another decade it had passed the eight billion mark and in 1869 the cut was over 12-3/4 billion feet. This figure was exceeded each year until 1932 when it dropped to a little over 10 billion feet. The biggest year was 1909 when the cut equaled 44 1/2 billion board feet.

The lumber census figures reveal the story of the migration of the industry from the New England and north Atlantic states to the Great Lakes and Central states, then to the Southern states and finally to the Rocky Mountains and the Pacific Coast.

Up to 1879 most of the lumber cut was reported by mills in the northeast when the Great Lakes area took the lead only to yield to the South in 1899. The South led for the next 27 years, at the end of which the West (Pacific Coast and Rocky Mountain areas) took the lead which they have maintained. The Northeast and the Lake State areas had by 1939 declined to a ratio of 3.9 and 3.1 per cent respectively of the nation's total annual lumber production.

According to the census reports of 1869, 1879 and 1889 Michigan was the leading lumber producing state. In 1899 Wisconsin took the lead and retained it until 1905 when Washington moved out in front to keep the lead until 1914 when Louisiana forged ahead for one year, but in 1915 Washington again took the lead, yielding to Oregon in 1938.

LONGEVITY OF PONDEROSA PINE

A careful ring count on a sound stump section of a tree felled in Klamath County, Oregon, showed the tree to be 726 years old. This was the oldest tree recorded, with another 714 years next in order. The oldest trees were slow-growing, were located on relatively poor-quality sites, and had been exposed to many forest fires. (F.P. Keen of U.S.D.A. in Journal of Forestry, 38 (1940), No. 7, pp. 597, 598).

MOTOR TRUCK HAULING COSTS

The TIMBERMAN for March has an article on motor truck hauling costs in Arizona and New Mexico by Walter G. Thomson of Timber Management. The study covered several sizes of trucks on various kinds of roads over distances ranging from $4\frac{1}{2}$ to 40 miles (9 to 80 miles round-trip) on five operations in the Region. The data collected on each trip included the gross and net Scribner Decimal C volume, number of logs, complete cost and operating data of the trucks, the distance hauled and the time required to haul over each kind of road traversed. Volumes hauled ranged from a minimum load of 1300 board feet gross for a $1\frac{1}{2}$ ton truck to a maximum of 11,300 board feet gross for a 10 ton truck. Among other things, it was found that in general, trucks below a 2 ton capacity are inefficient for hauling logs and larger trucks are efficient only when they carry capacity loads and operate steadily. The study furnishes valuable data which should be of a great deal of interest to operations using trucks.

TIMBER CUT, R-3, C.Y. 1940

There was cut from the National Forests of Region Three during the calendar year 1940 in Arizona 74,634,000 feet and in New Mexico, 41,084,000 feet. The above includes the commercial and cost sales and exchange. The average stumpage price of the timber cut in Arizona converted to M feet amounted to \$2.42 per thousand and in New Mexico \$2.07 per thousand, the average for the Region being \$2.30 per thousand. This was an increase of 5¢ per thousand over the value of the commercial and exchange cut in the calendar year 1939, when the stumpage price was \$2.25.

There was sold from the National Forests in the year 1940, 50,223,000 board feet, of which slightly over twelve and one-half million board feet was in Arizona and slightly over thirty-seven million in New Mexico. The cut of timber in 1940 showed an increase of approximately 17 million over that cut in 1939. In addition to the timber cut on the National Forest, the Forest Service handled for the State a cut amounting to 6,286,000 feet and for private individuals, 4,942,000 feet and timber rights amounting to 10,040,000 feet.

TIMBER CUT AND SOLD REPORT

The timber cut and sold report for the third quarter of the fiscal year 1941 did not show the under cut expected due to the excessive rain and snow during the quarter. The cut in Arizona was 9,123,000 feet and in New Mexico, 3,577,000 feet or a total of 12,700,000. This was somewhat better than was done in the third quarter of the fiscal year 1940 when the cut in Arizona was 8,075,000 feet and in New Mexico 3,103,000 feet. Consequently, the cut in the two states up to and including the third quarter of the fiscal year 1941 amounts to 75,537,000 as compared with 69,535,000 for the same three quarters of the fiscal year 1940. The Sitgreaves and Coconino National Forests with a cut of 6,285,000 and 1,355,000 respectively, led all forests in the Region in the cut for this quarter, as they did in the same period last fiscal year.

Commercial sales in the fiscal year 1941 to date amounted to 32,869,000 feet as compared to 25,052,000 feet for the same period 1940. The cut under sales at cost in the two states continues from year to year at about the same rate, 309,000 feet, which is only 3,000 feet greater than the amount cut during the same period in the last fiscal year.

LUMBER FIRM LEASES PLANT

On March 5 the Arizona Lumber and Timber Company announced that it had signed a long-term agreement leasing its mill and railroad line to the Saginaw and Manistee Lumber Company of Williams.

J. C. Dolan, president of the Arizona Lumber firm, said the mill would continue to operate as in the past, cutting about 30,000,000 feet a year and employing approximately 350 men in the plant and in the woods.

The March 7 issue of the Coconino Sun gave some interesting history of this operation in announcing the lease. The Arizona Lumber and Timber Company was established at Flagstaff in 1881 by Mr. Ed E. Ayer a Chicago lumberman and was the first large sawmill in Arizona. Later the mill was taken over by D. M. and T. M. Riordan, brothers. The mill was initially built for the purpose of supplying ties to the Atlantic and Pacific Railroad, now a part of the Santa Fe system.

The Arizona Lumber and Timber Company originally held timber rights on odd sections within the boundaries of the Coconino but has purchased national forest timber for the past 35 to 40 years and now holds two purchase contracts on that forest and is entirely dependent on publically owned timber.

PRESTRIDGE PURCHASES BREECE ALAMOGORDO PLANT

The Prestridge-Seligman Lumber Company of Grants, New Mexico, has purchased the sawmill, planing mill and box factory of the George E. Breece Lumber Company at Alamogordo, N.M., together with holdings in the Sacramento Mountains. This mill, with a daily capacity of from 75,000 to 100,000 feet is electrified throughout and is one of the most modern in the Southwest. It was operated under the management of the late P. P. Breece, son of Col. George E. Breece.

Barney Prestridge, the father of M. R. Prestridge, who now becomes manager, assisted as millwright in the construction of the mill in 1926-27. G. C. O'Neal of Bernalillo and Albuquerque is announced as plant superintendent, the new firm title to be M. R. Prestridge Lumber Company.

This sale in no wise affects the operation of the mills or the business of the George E. Breece Lumber Company in Albuquerque, New Mexico, nor its timber and land holdings in the region southwest of Grants, New Mexico.

LUMBER CONSUMPTION

According to a lumber consumption report issued by the Forest Service, the per capita utilization of lumber in the United States increased from 94 board feet in 1932, the low point of the depression, to 164 board feet in 1938. This increase continued through 1939, reaching 194 board feet. However, this top figure is far below the peak per capita consumption of 523 board feet reached in 1906. The 1938 figures show that the per capita lumber consumption varied from a low of 57 board feet in the District of Columbia to a high of 974 board feet in Oregon. One reason for the high per capita in Oregon is probably due to the fact that the timber supply is ample and cheap as compared with other construction materials and the relative low per capita consumption in many eastern states is closely linked with deficient or depleted forests.

IMPORTANCE OF FOREST PRODUCTS IN NATIONAL DEFENSE

Mr. C. P. Winslow, Director of the Forest Products Laboratory, in speaking before the 40th Annual Meeting of the Society of American Foresters, brought out the importance of forest products in the national defense.

Pointing out that Field-Marshal Hermann Goering had placed wood no less than second in the list of German necessities of war, Mr. Winslow outlined the vast number of uses in which wood is vital to the United States. Cantonments, pontoons, shipping containers for explosives, air-raid shutters, assault boats, charcoal for gas masks, rosin for shrapnel filling, and plywood for trainer planes are only a few of the military uses of wood.

The Germans have turned to wood for the production of motor fuel, edible sugars and synthetic wood "wools" and "cottons". Mr. Winslow stated that the procedures by which wood is converted to these uses has long been known to American chemists and that if the necessity arises, the United States can adapt wood with equal facility.

It was pointed out that the problems now before research men are the efficient adaptation of wood in the mass production of aircraft, including the development of fuselages, wings and other parts, in whole or in part by mass production molding, the development of variable density propellers for modern high powered airplane motors, and a number of construction details in the mass production of trainer planes were given high priority on the list of research needed to facilitate national defense.

Other items named included seasoning of gunstock blanks, improved decking materials for all naval craft, increased supplies of high quality pontoon timbers, improvement of gas-mask charcoal, improved designs for shipping containers for military commodities, substitutes for imported cork and kapok, and the solution of problems connected with the rapid erection of both temporary and permanent cantonments and other military establishments.

Mr. Winslow also mentioned that more adequate knowledge of South American hardwoods is needed in order to expand trade with South America.

CUBIC LOG SCALE

In TIMBER TOPICS for March and April is an interesting article by E. F. Rapraeger of the Northern Rocky Mountain Experiment Station, suggesting the use of a cubic foot log rule. He points out that 40 or 50 log rules have been devised, all showing different board foot contents for the same log, the construction of each rule showing dissatisfaction with former ones. Some of the log rules were based on a formula making an allowance for waste. Others were based on diagram and in his opinion even the Forest Service Decimal C variation of the Scribner is no more accurate than the original. There is, claims Mr. Rapraeger, little possibility of constructing a board foot log rule for different log sizes and tapers that will estimate mill tally accurately for every mill as certain assumptions are necessary as to species, utilization, whether mill machinery is good or poor, saws thin or thick, inch boards or timbers produced, none of which can be made except for the individual operation.

Mr. Rapraeger believes that the best way out of present difficulties is to adopt a standard that is the same size today and tomorrow, and under all logging and manufacturing conditions, based on the amount of wood contained in the log, without any of the assumptions now necessary. The article goes into considerable detail and is of particular interest to those handling timber operations.

ANALYSIS OF DATA FOR TREES CUT ON FT. VALLEY EXPERIMENTAL FOREST

The actual age of 2,576 trees cut on the Ft. Valley Experimental Forest in the fall of 1939 was determined and the total loss due to defects and unmerchantable material secured. The trees were segregated into the three age classes which were of merchantable size for saw timber (Class 1 trees cover only pole-sized material and none were cut). Class 2 covers trees 150 years and younger; Class 3, 151 to 225 years and Class 4; 226 years and over. It was found that the average tree in Class 2 had a gross volume of 311 bd. ft. and a net of 286 bd. ft.; Class 3 trees a gross of 444 and a net of 404 bd. ft.; Class 4 trees a gross of 1,302 and a net of 1,104 bd. ft. This shows that defect and unmerchantability amounted to 7.2% of the gross volume for Class 2; 9.9% for Class 3 and 15.2% for Class 4 trees and indicates that as the age of the tree increases so does loss, being especially rapid as the tree reaches age Class 4. This suggests that a considerable saving is possible if a sufficient volume of the stand is merchantable and can be cut before reaching age Class 4.

Continuing the analysis of the data for the trees cut on the Ft. Valley Experimental Forest, a segregation was made by the 4 vigor classes. The average A vigor class had a gross volume of 827 bd. ft. per tree and a net of 779; B vigor class 551 and 504; C, 339 and 293 and D, 255 and 200. This shows that the board foot loss due to defect and unmerchantability differed little by vigor classes but when this loss was expressed in percent of the gross volume, the results for the A, B, C, and D vigor classes were as follows: 5.8%, 9.5%, 11.7% and 21.6%. The percentage loss under this grouping increases as the vigor declines, while the board foot loss per tree remains fairly constant. The average gross volume per tree declines rapidly as the vigor declines.

A large number of the trees in the Ft. Valley study fell within three 30-year age groups, namely: 111-140, 141-170, and 231-260. The wide range between the smallest and largest tree in these three age groups is of interest. They were as follows: 9.7" to 40.5" for the 111-140 age group. (The mean age of this group was 130 years and the mean diameter was 20.8"); 10.9" to 39.8" for the 141-170 age group. (The mean age of this group was 145 years and the mean diameter 21.8"); and 14.8" to 46.8" for the 231-260 age group. (This group had a mean age of 246 years and a mean diameter of 31.2"). This clearly shows that diameter alone is a very poor indication of the tree's age.

These data are valuable in determining technical rotations. At a mean age of 145 years the trees had a mean diameter of 21.8" and a fairly large volume of the stand would be of sufficient size for saw timber. This indicates that the region's use of 150 years as the length of a technical rotation for saw timber is fairly sound. These data indicate also that for hewn ties which require trees of from 15" to 17" d.b.h., a technical rotation of approximately 110 to 120 years is adequate.

USE OF TROPICAL HARDWOODS SUGGESTED

According to SCIENCE, Mar. 14, Mr. Carlile P. Winslow, director of the U. S. Forest Products Laboratory, at Madison, Wis., suggests a program of research on woods from the forests of tropical America which should be called upon to replace some of the old world tropical woods now becoming difficult to get because of war conditions. Qualities and adaptability to American needs should be learned, since with the exception of mahogany, Spanish cedar, several dyewoods and a few other varieties, most of the American tropical hardwoods are still wholly unknown in this country.

ARIZONA LUMBER MILL OPENS NEW YORK OFFICE

An article from McNary, Arizona in the November 16 issue of the AMERICAN LUMBERMAN stated:

"A New York City sales office was opened November 1st by the Southwest Lumber Mills, Inc. according to a statement issued here by James G. McNary, president of that company. The company's sales of moulding and lumber for all territory east of Chicago will be handled through this office located at 1041 Grand Central Terminal Bldg.

"Sales for the middle West territory will continue under the direction of D. A. Weidler, who has charge of the company's Chicago office, there being no change in the company's sales set-up in that territory.

"The Kansas City territory and west are handled directly from the general offices at McNary.

"L.D. Roberts, formerly with the Warren-Lamb Lumber Co. in the Black Hills district of South Dakota, has joined the staff of the company as resident sales manager at McNary."

NAVAL STORES - NEW STYLE

Beginning with 1934, there were several new developments in the naval stores industry which produces rosin and turpentine as principal products, says a recent article in The Agricultural Situation. Some operators, believing the day of the old pot still was done, began putting up modern distilling plants with the idea of buying crude gum from surrounding areas. Today there are eight such plants in Georgia and one in Florida. These central distillation plants cost \$30,000 to \$150,000 as compared with \$2,000 to \$5,000 for the old-type stills. They have modern equipment for purifying and standardizing the output, and can feed the product to market in an orderly manner.

These plants continue to ship turpentine in well-made wooden barrels and in steel drums, but most turpentine now moves in tank cars. Rosin is marketed in various types of packages such as wooden barrels, metal drums and heavy paper bags; also, hot rosin is shipped to soap plants in insulated tank cars.

The Federal naval stores conservation program was inaugurated in 1936. The program is administered by the Forest Service, U. S. Department of Agriculture.... (From the Clip Sheet)

ARIZONA PREFERS WOOD POSTS

Under the caption "Arizona Cedar Posts to be Given a Break", the following article appeared in the December 5, 1940 issue of the Brewery Gulch Gazette, published at Bisbee, Ariz.:

"Appreciation was voiced here today by several hundred cedar post producers, cattle and sheep growers for the announcement of W. R. Hutchins, state engineer, that cedar posts will continue to be used along Arizona's highways.

"Mr. Hutchins' statement followed a report made by the experiment station, U. S. Department of Agriculture at Tucson, that exhaustive scientific tests in the laboratory and in the field proved the superiority of cedar posts over other materials of comparable value.

"Arizona's stand of cedar is said to be inexhaustible under the schedule of cutting prescribed by the Forest Service."

FOREST INSECT CONDITIONS R-3

Forest insect conditions in the Region are shown to be normal for the C.Y. 1940 by a summary of the annual reports from the forests. The report by Mr. R. L. Furniss, Associate Entomologist, Forest Insect Laboratory, Portland, Oregon, of his extensive examination during October of areas in the Region where bark beetles have caused the greatest damage in the past, substantiate the reports from the forests. In 1939 the Prescott reported a rather severe infestation of Dendroctonus and Ips within the Horsethief Basin recreational area. Control work was started on this area in January, 1940, and completed in May. This work, which covered 7,200 acres, was successful in controlling the outbreak. Only a few groups of bark beetle killed trees were found in the examination of this area in October, 1940. Follow-up control work is to take care of this group.

Reports from the forest regarding the Great Basin tent caterpillars show that the infestations are greatly reduced. Areas that were heavily infested two or three years ago were almost entirely free of caterpillars last summer. However, there are still extensive infested areas in the aspen stands. The severe Matsucoccus scale infestation of three to five years ago on the Prescott has subsided and is normal again. The Prescott reports that no twigs examined during this year (1940) could be identified as having been killed by the scale.

The Region has been fortunate during the past year in having so little damage by forest insects.

THE CAROB TREE

The December issue of NATURE magazine has an interesting article on the Carob tree (Ceratonia siliqua) which evidently originated in Palestine and was spread by man into all of the Mediterranean countries and more recently into southern Asia, Africa, United States, Mexico, South America, Hawaii, Australia and New Zealand. The bark of the tree is similar to that of the American hard maple. The leaves resemble the New England white birch and the fruit is in great clusters of bean-like pods a foot or more in length. The fruit was the staple food of millions of Arabs and often the only food available for cattle, horses, sheep, goats and swine. The Carob pods are 40 to 55 percent sugar and sugar which is now manufactured from them is especially in demand by the confection and baker trades. The tree is adaptable to areas in the United States where rainfall is 6" or more each year and where winter temperatures do not ordinarily go below 15 degrees (F). A five-year old tree will produce from 300 to 500 pounds of fruit, the yield steadily increasing and by the 16th year the usual yield will be around 3,000 pounds. The stock food value of these pods is $2\frac{1}{2}$ times that of barley.

STUDY PLOTS ON KAIBAB

Two series of plots with ponderosa pine reproduction in the seedling stage have been under study on the Grand Canyon Division of the Kaibab since 1931 by the Kaibab personnel. Each plot was divided into two parts, one was open to grazing and one fenced. Up to October, 1940 the fenced area on plot 1 had lost 96.55% of the seedlings, the open plot 97.52%. The height of those inside was 9" and those outside 8". On the second plot the fenced portion had lost 94.33% of its seedlings and the open part 84.51%. The height in both cases was 11".

NEW TYPE OF STOVE FOR USE OF TREE BRANCHES AND TRIMMINGS

Forest cuttings now wasted can be used in a new kind of wood stove that will operate for many hours without attention according to SCIENCE magazine of February 28.

When forests are cut for timber, 30 to 40 percent of the wood constituting the branches and trimmings is useless as timber. The use of these for heating will aid greatly in efficient maintenance of the forest. In the new types of heaters the fire is only at the bottom of the pile. The heat converts the upper wood into charcoal. As ashes drop through the grate into the pit below, fresh charcoal is automatically fed to the burning zone. The heater requires attention only occasionally to refill the wood reservoir and the ashes need removing only every few days.

VOLTMETER FOR EXAMINING TREES

According to SCIENCE magazine, tree surgeons now have available an instrument that will do for them what a stethoscope does for physicians. Dr. Thaddeus Parr is the discoverer and states that there is a slight difference in electrical potential between the top and the root of a tree. During the time of fast growth in the spring, this gradient is from top to root; later it reverses its direction. In a tree seriously injured by insects or otherwise in bad health, the reaction is abnormal, being either weaker than in a sound tree or reversed in direction. The simple but very sensitive voltmeter has been developed and can be carried into the woods so that field diagnosis will be readily possible.

CHRISTMAS TREE BUSINESS ON THE COCONINO NATIONAL FOREST

The Forest Supervisor of the Coconino has submitted a comparative report on Christmas tree business for the years 1936-1940 inclusive. The total number of trees sold from lots has increased from 552 in 1936 to 1,334 in 1940, while the number sold from stump started out in 1936 with 287, dropped to 140 in 1937, reached its high in 1939 with 487 and totaled 205 in 1940. This gives, on total trees sold, 839 in 1936 increased to 1,539 in 1940. The total number of trees given under free use equaled 750 in 1936, reached its high in 1939 with 1,073 and dropped to 841 in 1940. The total number of Christmas trees removed from the Forest has shown a steady increase with 1,589 in 1936 and 2,370 in 1940.

RESULTS OF TESTS ON TAMARISK

Tamarisk (*Articulata*) growing in southern Arizona has been tested by the Forest Products Laboratory and the wood was found to be very heavy, shrinkage large, composite bending and compressive strength, strong, moderately stiff, very hard and shock resistance high. The tree grows very rapidly and consequently it would be expected to be soft and weak. A comparison with other hardwoods can be made by a study of U.S.D.A. Technical Bulletin No. 158.

NATIVE WALNUT FURNISHED PRAIRIE STATES FORESTRY PROJECT

The Prescott was successful in securing 146 pounds of native walnut seed and the Lincoln found available for purchase 200 lbs. Both lots have been shipped to the Prairie States Forestry Project where they were used in growing planting stock for use in the root rot studies being conducted on the project.

WILDLIFE AND RANGE MANAGEMENT

KOOGLER DETAILED TO WASHINGTON OFFICE

Mr. W. G. Koogler of the Regional Office left on April 1 for Washington where he will be on detail for approximately four weeks assisting Mr. G. R. Salmond in the preparation of the new watershed management section of the Manual.

WILD MUSTARD PLANTING ON THE GILA

During last summer, experimental planting was done with wild mustard seed on Grouse Mountain at an elevation of 10,000 feet; on the Iron Creek fire area, elevation 8,500 to 8,800 feet; on the Whitewater Creek fire area, elevation 8,500 feet; and on the Little Whitewater Creek fire area at an elevation of 5,500 feet. The results from the planting on Grouse Mountain were poor mainly because of dense shading. On all the other areas most satisfactory plant growth was obtained; plants from 20 to 52 inches tall and having a spread as much as 36 inches were found growing throughout the plots. Also, from all indications, there should be a good yield of seed from this first year of production. In addition to the use of the mustard on burned areas, excellent results have also been obtained from the common oats and rye mixed with smooth brome and crested wheat grass planted on the Iron Creek area, July, 1939. This planting produced a good stand by October of the same year and has maintained an excellent ground cover. The planting was done both under total exclusion and open range conditions. Upon examination, October, 1940, all the species in the excluded plot had developed mature seed heads.

The foregoing is from a recent report by Junior Forester C. J. Anderson, who has charge of the Glenwood range plant nursery.

Ranger Gray of the Lincoln National Forest reports that mustard seed planted last spring on the Silver Plume fire area came up very thick and grew rapidly the first few days. However, due to lack of moisture the plants failed to maintain their rate of growth and apparently stagnated. His observations were that the largest of the plants grew only six to eight inches high and did not mature or bear seed. Mr. Gray believes that the germination and early growth will warrant another attempt as it is presumed that the exceedingly dry year was the cause of the poor growth.

SILT IN STREAMS HURTS AQUATIC LIFE

"The silt that has washed off American farms in recent years -- taking the nation as a whole -- has done more damage to aquatic life -- fish, shellfish, animals, and plants -- than the industrial pollution from factories," said Dr. Hugh H. Bennett, Chief of the Soil Conservation Service, speaking before the Ohio Division of the Isaak Walton League of America at Columbus. But progress in national land use and soil conservation programs is stimulating wildlife conservation, said Doctor Bennett. One of the basic principles in all USDA conservation programs he pointed out, is the restoration and maintenance of an adequate cover of vegetation on the soil. (From U.S.D.A. Daily Digest)

ANALYSIS OF DEER KILL RECORDS

A total of 3,871 deer were recorded and antlers measured at 41 hunter checking stations operated on National Forest areas in Arizona and New Mexico during the 1940 season. In Arizona 847 were measured and in New Mexico a total of 2,924 bucks were recorded through these stations.

Approximately 45% of the return postal cards giving dressed weights were received from interested sportsmen. The kill, as judged by the antler beam diameter measurements, shows 61% of the deer killed on the Cibola, Gila and Apache area south and west of Magdalena were immature, 61% of the crop on the Sacramento Division and 65% of the crop on the Guadalupe Division of the Lincoln were immature deer.

A bumper crop consisting of 45% superior animals was taken from the Kaibab (North). The Cimarron area adjacent to the Carson produced a crop of 31% superior deer and the Pecos district of the Santa Fe produced a crop of 24% superior animals.

Of special interest was the quality of the crop taken from the Prescott National Forest on the former Walnut Creek Game Refuge which was opened to hunting this year for the first time. Here 22% of the bucks were of the superior class compared to adjacent areas on the Bill Williams Wildlife Management Unit which shows 12% and the Chevalon district of the Sitgreaves which had 9% in the superior class.

CONSERVATION PACT SIGNED BY AMERICAN REPUBLICS

The Convention on "Nature Protection and Wildlife Preservation in the Western Hemisphere", a conservation pact signed by seven Latin American governments and the United States on October 12 at Washington, D.C. became effective on January 12.

The purpose of the Convention is the protection and preservation in their natural habitat of representatives of all species and genera of the native flora and fauna of the American Continent, "in sufficient numbers and over areas extensive enough to assure them from becoming extinct," and the protection and preservation of "scenery of extraordinary beauty, unusual and striking geologic formations, regions and natural objects of aesthetic, historic, or scientific value."

The Convention drafted twelve articles. Article six provides for cooperation among the contracting governments in promoting the objectives of the Convention. To this end they will "lend proper assistance, consistent with national laws, to scientists of the American Republics engaged in research and field study; they may, when circumstances warrant, enter into agreements with one another or with scientific institutions of the Americas in order to increase the effectiveness of this collaboration; and they shall make available to all the American Republics equally through publication or otherwise the scientific knowledge resulting from such cooperative effort."

(From the Dixie Ranger)

KAIBAB DEER HUNT

A few high lights on the 1940 Kaibab deer hunt, one of the most successful ever held on that area are:

Deer of superior quality are being produced as the range rapidly improves under controlled management. In 1937 the record kill was a buck weighing 247 pounds dressed, in 1938 the record rose to 268½ pounds, and in 1940 to 280 pounds. From 1928 to 1936 the record bucks for each year ranged from 207 pounds in 1932 to 246 pounds in 1936. This year 75 of the bucks taken exceeded 200 pounds dressed and 40 ranged in antler spread from 30 to 41 inches. Last year 66 percent of the hunters were successful and this year 82 percent were successful. The State game wardens and State commission cooperated in the hunts and spent 12 days on the area.

RECREATION AND LANDS

JOHN H. SIEKER, NEW CHIEF OF RECREATION AND LANDS

The appointment of John H. Sieker to the position of Chief of the Division of Recreation and Lands was announced April 22.

Mr. Sieker has been assistant chief of the division for nearly two years and acting chief since the death of Mr. Marshall in November, 1939. Mr. Sieker's work in the Forest Service has included ranger positions on the Washakie in Wyoming, Chippewa in Minnesota, Black Hills in South Dakota and junior forester and assistant supervisor of the Harney, South Dakota, and previous to his transfer to the Washington office he was supervisor of the Shoshone National Forest in Wyoming. He is a graduate of the Yale School of Forestry.

ASSISTANT SUPERVISOR GROESBECK DETAILED TO CIBOLA

Assistant Forest Supervisor, E. C. Groesbeck of the Coconino National Forest was on detail to the Cibola for a few days during the month of April working with Assistant Supervisor Charles and Ranger Smith on a step-by-step comprehensive plan for improvement of the Sandia winter sports area in order to provide for the ever increasing use of the area. Mr. Groesbeck has had considerable experience in planning work and is an experienced skier, having been raised near Steamboat Springs, Colorado and he at one time held several skiing records.

SABINO CANYON

The March issue of the ARIZONA HIGHWAYS devotes two pages to Sabino Canyon. There are four photographs, one a large picture 9 $\frac{1}{2}$ " x 12" showing part of Sabino Lake with the hills and sky in the background. The sky is partly filled with clouds which adds much to the picture. A short write-up on the recreation area reads in part as follows:

"A precious jewel of scenic beauty - snugles in the richness of the foothills of the Santa Catalinas seventeen miles to the north and east of Tucson. Within the majestic walls of this canyon lies the Sabino Canyon Recreational Area, the most heavily used recreation area in the Southwestern National Forest Region. Its charms are equally attractive to the visitor - winter or summer - and in one year alone 150,000 people sought there the pleasures of one of Arizona's most delightful outdoor places."

JEFFRY TROPHY JANUARY 18-19

New Mexico Ski Clubs which are members of the Rocky Mountain Ski Association sent representatives to Sun Valley, Idaho to compete in the Jeffry Trophy meet held there on January 18 and 19. Walter Boyce, head messenger in the RO and Dick Broderick formerly a messenger in the RO and now with the SCS attended as representatives of the Albuquerque Ski Club.

WS AND WS

Robert Monahan of the Washington Office arrived in Taos from Colorado on Feb. 10. He is a representative of the Division of Recreation and Lands and was here on an inspection of WS areas. "Mr. Monahan is an expert skier and has had a great deal of experience in the management and construction of WS areas." His travel schedule included the following WS developments: Agua Piedra, Carson; Big Tesuque and Hyde State Park, Santa Fe; Sandias, Cibola; McGaffey, Cibola; Williams East, Kaibab; Indian Creek and Mingus Mt., Prescott; Arizona Snow Bowl, Coconino. From Flagstaff Mr. Monahan went to Region 5. Walter L. Schipull of the Denver office was with the party for the first several days in New Mexico and spent some time in the Region with our Watershed Management men.

YOUR FOREST SERVICE

"No breath of scandal, to my knowledge, has ever touched the United States Forest Service. Few other Federal government bureaus can boast of such a record. Of all Uncle Sam's landlords -- and the people have many -- the Forest Service is perhaps the most benevolent. I have sought the reason unsuccessfully over a quarter of a century but it eluded me until I read FOREST OUTINGS recently, a book written by 30 foresters, edited by Russell Lord, and designed to show 'the pleasures these (national) forests may give the people.'

"I know the basic policy that motivated the administration of our national forests but I didn't know whence it stemmed. But there it was, on page 31 of FOREST OUTINGS: 'When it comes to national-forest recreation the Jeffersonian tenet that the best government is the least government still stands.'

"Next month (March) the Forest Service (national forests) will be 50 years old. It has been useful to the citizens for half a century in many ways, but in none has it served more admirably than in providing wholesome recreation without unneeded regimentation and restriction to hundreds of millions of people.

"The whole story of forest recreation is brilliantly told in FOREST OUTINGS, by long odds the finest written book that has emanated from the belching presses of the Government Printing Office. Read it and you, too, will tip your hat next month in obeisance to a thoroughly mature and respected agency of government." --Westways, Feb. 1941--

TIN DEPOSITS OF THE BLACK RANGE

It has been known for a number of years that deposits of tin occur on the west slope of the Black Range within the Gila National Forest. A preliminary report by Carl Fries, Jr. has been received in the form of Geological Survey Bulletin No. 922-M. Mr. Fries states that the report is based on a detailed examination of three principal areas which are along Taylor Creek, Hardcastle Creek and Squaw Creek. The tin-bearing stringers occur mainly in the altered and fractured parts of certain thick flows of porphyritic rhyolite near the bottom of the sequence. The stringers are irregular and discontinuous and range in size from thin films which extend for one or two feet along fractures to tabular bodies about an inch thick and 20 or 30 feet long. The stringers are too small to be mined separately, and the deposits would have to be mined by bulk methods. In the areas sampled no sizable deposit has been found that contains as much as 1 pound of tin per ton. Placer deposits have been found only in the vicinity of bedrock deposits. The examination shows that the deposit is too limited to be of commercial value at the present time.

ENGINEERING

10TH ENGINEERS (FORESTRY) BOOK OUT

The 10th Engineers (Forestry), in the organization and recruiting of which the Forest Service had such a large share, now has available a history and roster of the Regiment. After a good many years of effort, a special publication committee of ex-members of the 10th have finally published this 48-page booklet. Copies may be secured for 50 cents each, postpaid, by writing to John D. Guthrie, Army & Navy Club, Washington, D.C. The book is called "The Carpathians", from the name of the British ship on which the Regiment went across in September, 1917.

NEW EQUIPMENT MOVIE

Motion pictures of special equipment developed during the past few years were shown at the Regional Office March 26 by Theodore Flynn of the Equipment Laboratory, Region 6, and proved unusually interesting. Equipment shown included a trail tractor, a trail truck, a gasoline-powered jackhammer, the Norcross light compressor and a portable power-saw.

Mr. Flynn brought out in his running comment that the tractor averages less than 7 gallons of gas a day and can easily pull a thousand-pound load over a roughed out trail. The trail truck, similar in appearance to the "midget car" which the Army has introduced, differs from the "midget car" in being powered on the rear wheels, whereas the Army midget car has four-wheel drive; however, both vehicles use the same small Ford engine. Mr. Flynn said the trail truck can haul a load equal to that which five horses could carry and can travel at 8 to 10 miles per hour on trails (up to about 15 miles per hour on open country).

He pointed out how the Norcross light compressor can be knocked down and hauled on horseback.

Mr. Flynn visited Region Three on a loop trip which took him to the Forest Products Laboratory and to automobile supply centers at Detroit and Chicago.

MR. COLBY DEMONSTRATES NEW MAPPING METHOD

An interesting demonstration in the field of relief model construction was given by Mr. V. V. Colby, Assistant Exhibits Designer, before a group of Operation and Engineering officials of the Regional Office. A new method for building an exposed contour relief model, such as many rangers have of their districts, has been worked out by Mr. Colby. The result is a lighter model, and built at less expense due to decrease in labor. A few features still have to be worked out, particularly in the building of a model showing steep mountainous terrain on a small scale.

The more interesting demonstration was made by Colby showing his method of building a relief model of both contour maps and aerial photographs. He has worked out a combination of metal and photoprint paper which allows him to expand this combination, without breaking or cracking, into the relief necessary to show a third dimensional picture, such as is viewed by looking through a stereoscope. This is done with some unique vibrating gadgets and accuracy gauges which Mr. Colby has designed and built.

NEW WPA RELIEF MODEL PROJECT

A new WPA Relief Model Building and General Drafting Project has been approved. This extends the work for another 10 to 12 months and gives us the opportunity to complete state models for Regional Office branches and each supervisor's office, and several ranger district maps now under construction.

This project is broader than the old one since it is not confined to relief model building but includes general drafting as well. This enables us to use the draftsmen to some extent on map work in the drafting office if their services are needed. With this arrangement it gives those who show special ability an opportunity to get actual map drafting experience, assisting them to qualify for permanent drafting positions.

We feel that this project is giving excellent returns from the standpoint of both useful output and developing men to better themselves.

In the last eighteen months men developed on this project have satisfactorily filled the following positions:

Two to permanent civil service drafting positions with another government agency, at \$1,620.00.

The former superintendent of this project now satisfactorily filling civil service appointment in our drafting work, and a former security worker has been promoted to the position of superintendent.

Four have gone with the National Guard to the Army with the rank of sergeant.

Four have filled from two to three temporary positions, each satisfactorily, with other government bureaus with the \$1,620 to \$1,800 rate.

Three have been used in the Regional Office on coloring and elementary drafting.

Six have passed the civil service examinations and are eligible for appointment.

Eight are taking advantage of the special night course in drafting at the University.

WO COMPLETES STUDY ON STEEL VS. TIMBER TOWERS

The investigation of timber and steel lookout towers to determine the suitability of the timber structure as compared to steel and the relative costs of each type has been completed by the W.O. Division of Engineering. Erection cost records for approximately 150 towers were analyzed. They show that on the average timber towers are more expensive to erect. The average higher cost of timber towers for the 7 x 7 foot cab type, including erection, labor, footing materials and labor, lightning protection materials and labor, and inspection at contractor's plant is \$165 for 120-foot tower, \$135 for 100-foot tower, \$110 for 85-foot tower, and \$80 for 67-foot tower.

As a general rule, future procurement of towers of standard design will be handled by taking alternate bids on timber and steel and including the foregoing figures in comparing bids.

The evaluation figures do not contain anything for transportation from rail head to tower site. On towers where long or difficult hauls are involved this may be important. For such cases requisitions will contain detailed information on estimated hauling cost per ton mile in order that this factor may be given proper consideration.

(From WO Information Digest)

INFORMATION AND EDUCATION

SHOWBOAT CAMPAIGN

The showboat campaign under the command of Skipper Russell recently completed a three months cruise on the Tonto National Forest and was undoubtedly the most successful program ever presented on that forest and is an outstanding record in the Region. The period covered 57 show-days with 172 showings and a total attendance of 35,250 or a daily average of 618.

The population of the Tonto's zone of influence, according to the 1940 census, is 215,000 and an objective of contacting 10 percent of the population was set, but 16.3 percent was reached.

The pictures and talks were well received and it is believed that benefits may be expected by the people having a better understanding of our land management objectives which have such a direct bearing upon the entire Salt River Valley.

Mr. Russell's next trip will be on the Cibola National Forest.

S.A.F. MEETING AT ALBUQUERQUE

Henry Clepper, National Executive Secretary of the Society of American Foresters, was among speakers at the dinner meeting held by the Southwestern Section of the S.A.F. on the night of February 22 at Albuquerque. Joseph Libby of the Soil Conservation Service Regional Office at Albuquerque and Judge Richard H. Hanna, Albuquerque attorney, who served as a forest ranger in Arizona in the Nineties, were other guest speakers. The meeting was interesting and successful.

From Albuquerque Mr. Clepper went to Santa Fe for an over-night visit, enroute to Denver where the Central Rocky Mountain Section met on February 28.

ARIZONA NATIONAL FORESTS RECEIVE PUBLICITY

In the January issue of the ARIZONA HIGHWAYS is a double page spread on the Arizona Snow Bowl skier's paradise, with ten photographs. Mr. Carlton, the editor makes prominent mention of the work the Forest Service has been and is doing to make this area available to the people of Arizona.

In the same issue is an article entitled "The Eight National Forests of Arizona" by Hollis S. Palmer, Assistant Range Examiner on the Tonto National Forest. Mr. Palmer has done a very nice job of describing the values of the National Forests to the State in a most interesting way. The article is illustrated by twenty photographs of the various forest activities.

EXTENSION SERVICE GIVES FOREST SERVICE TIME OVER KOB

A letter from Mr. L. H. Gould, Assistant County Agent Leader of the Extension Service at State College, New Mexico, stated that they had scheduled the third Friday at 7:45 p.m. in each month, beginning with the month of March for a program by the Forest Service on their regular State College Educational Half Hour.

MRS. PITT VISITS REGION

Mrs. Elizabeth S. Pitt, Educational Adviser (I&E) of the Washington Office, completed a two month's detail in Region Three and left for Washington March 19. During her stay she contacted leading members of the various organizations of Women's Clubs throughout the two states in behalf of the forest program and also assisted in several radio broadcasts. Mrs. Pitt visited the forest headquarters of the Carson, Santa Fe, Cibola, Lincoln, Sitgreaves, Coconino, Kaibab, Prescott, Tonto and Coronado National Forests and had an opportunity to see a part of several of the forests.

D.A.R. OFFICIALS ON SHOW-ME TRIP

Mrs. Henry M. Roberts of Washington, D.C., President-General of the Daughters of the American Revolution and Mrs. Rolla Hinkle of Roswell, State President of the D.A.R., were taken to Santa Fe and Taos on a show-me trip by Mrs. Elizabeth Pitt, John D. Jones and C. R. Dwire on February 23. At Santa Fe, Mrs. Pitt left the party in order that Supervisor Andrews could join it. At Taos a visit was made to the Supervisor's office, where relief model maps and enlarged photographs made it possible to explain the extent of National Forests in the Southwest and to describe the various activities of the Service. Mrs. Roberts was particularly interested in the dependency of the people of northern New Mexico upon the resources of the National Forests.

NATIONAL FOREST PRODUCTS AS TABLE CENTERPIECE

The National Convention of the Daughters of the American Revolution was held in Washington, D.C. April 14 and 15, and on the morning of the 14th a conservation breakfast at the Mayflower Hotel was one of the highlights.

At the request of Mrs. Frank E. Andrews, National Vice Chairman of Conservation of the D.A.R., the centerpiece and favors were furnished jointly by the Albuquerque Chamber of Commerce, Cibola National Forest and I&E. The centerpiece consisted of a corkbark fir log about 10 inches in diameter and $2\frac{1}{2}$ feet in length which rested horizontally in an oval bed of forest greens consisting of sprays of foliage from Douglas and white fir and several varieties of juniper and pinon. The favors were small pottery jars made by the Isleta Pueblo Indians and each jar contained cellophane envelopes filled with pinon nuts. With each favor was a short statement explaining the value of pinon nuts as a cash income to many of New Mexico's families of the lower income group.

MEMORIAL FORESTS

A number of organizations in the Southwest are showing a great deal of interest in the establishment of Memorial Forests. The first cooperative agreement reaching this office was for an area on the Santa Fe National Forest sponsored by the Children of the American Revolution. This was followed by an agreement covering 25 acres on the Lincoln National Forest sponsored by the New Mexico Federation of Women's Clubs. Next comes an agreement from the Prescott for an area for the Arizona Daughters of the American Revolution and an application has been made for an area on the Santa Fe to be sponsored by the New Mexico Daughters of the American Revolution. The above agreements will provide funds for the planting of some 30 acres of forest land this spring.

EIGHTH ANNUAL TREK OF DONS TO SUPERSTITION MOUNTAIN

The Eighth annual trek of the Dons to Superstition Mountain took place Sunday March 9. A record breaking crowd attended. A demonstration in panning for gold, using the sands of the Peralta canyon brook, a sharp-shooting exhibition and talks on scorpions and the desert flora, a short hike to the Indian caves and through the interesting cactus forest near the base camp were some of the high lights of the day. A fine musical program was presented and the Donnas in fiesta costumes served a Spanish dinner from 5 to 6 p.m. which was followed by the campfire program in the natural amphitheater at the camp site.

TOURIST BUREAU ADVERTISES FOREST ATTRACTIONS

A recent news release by the New Mexico State Tourist Bureau states that "the thrill of getting off the beaten path and into the scenic grandeur of the rugged high country is just a matter of driving into the National Forests in New Mexico. All of the forest regions throw a blanket of cool greenness over the high mountain country."

Special emphasis is placed on the 2,500 miles of forest roads and 3,000 miles of forest trails which have been built with an eye for scenic beauty and the preservation of roadside timber in its natural state.

The forest trip booklets, 110 forest camps and picnic grounds, the fishing, hunting, saddle and pack trips, hiking, winter sports and unlimited photographic possibilities are all favorably mentioned.

SERVICE REPRESENTED AT SCOUTER'S STATE-WIDE BANQUET

The expansion banquet held on the evening of February 18 at the Hilton Hotel in Albuquerque, to celebrate the completion of arrangements for expanding the Boy Scout organization in New Mexico, had a goodly sprinkling of Forest Service men among the 120 "Scouters" who came from all parts of New Mexico.

Ed Ancona, as President of Northern New Mexico Council, Boy Scouts of America, presided very capably, apparently not flurried by his proximity to Governor John E. Miles, Archbishop Rudolph Gerken, judges, college executives and high officials of the Scout organization. Other Service members present were Associate Regional Forester Cheney, Supervisor Marker and Assistant Supervisor A. L. Bolander of the Carson, J. T. Mettler, Fred McCament and Bob Kelleher, the last three from the RO.

Scout officials included Arthur A. Schuck, National Director of Operations; James P. Fitch, Regional Scout Executive, Dallas, Texas; and officers of the three Scout Councils in New Mexico.

FORESTRY TABLE CENTERPIECE RECEIVES FAVORABLE MENTION

A letter has been received from Margaret Wessels, Luncheon Chairman of the Catholic Daughters of America, thanking the Forest Service for their work in furnishing the centerpiece for their luncheon held at the Alvarado Hotel on April 21. The centerpiece was patterned after that used by the Daughters of the American Revolution at their National Convention in Washington, D.C. on April 14 and 15.

All of the green sprigs were carried away and several guests remained after the luncheon in order to see more closely just what cork bark fir is really like. Those responsible for the arrangements were Ranger Smith of the Cibola, Fred McCament of I&E and Mrs. Jones of I&E who gave a talk at the luncheon describing the various species of evergreens used.

FAN MAIL

The following letter was received in the RO:

"I want to thank you for your kindness and cooperation in sending me material which I am now using in our nature, conservation and Scouting program. I sincerely appreciate your fine efforts in educating the public and school children concerning our forests and wildlife. In speaking for the Boy Scouts here I can only say that we are grateful to be able to do our little bit in conserving our forests and wildlife. We know that the men in the Forest Service of our country are doing a good job, and we also know that they are doing a job far beyond their lines of duty."

RESOLUTION ADOPTED BY D.A.R.

The following resolution was adopted by the National Society, Daughters of the American Revolution, at the Fiftieth Continental Congress, April 17, 1941, Constitution Hall, Washington, D.C.:

"WHEREAS, The conservation of our forest resources is a matter of vital concern to the future prosperity and defense of our country and should not be neglected in the stress of other more immediate measures for defense;

"RESOLVED, That the National Society, Daughters of the American Revolution, urge the United States Congress and the State Legislatures to recognize the need for making adequate provision for the intelligent use and care of our natural resources as an integral part of the National Defense Program."
(From the WO Information Digest)

PHOTO MADE IN R-3 WINS HONORABLE MENTION

A photograph taken by W. H. Shaffer, Washington Office photographer, on the Carson National Forest in 1939, received honorable mention in the Professional Class at the ARA Camera Club's Third Annual Agriculture Photo Show in Washington during the week ending December 14. The photograph is entitled "Mission Bell", and presumably was one Mr. Shaffer took at the old mission in Las Trampas, while escorted by Fred L. McCament of I&E. This photograph is one of many excellent subjects now in the I&E photo file as the result of Mr. Shaffer's tour of Region Three.

ARIZONA HIGHWAYS MAGAZINE FOR JANUARY

The following is quoted from the editorial page of the January issue of ARIZONA HIGHWAYS:

"Through the good offices of Hollis Palmer, of the Tonto National Forest, we are privileged this issue to present a short account of the eight national forests of Arizona. Few people realize the extensiveness of our forests, their multiple uses, or the great care being taken to preserve them for the enjoyment and use of future generations. Too often, also, we fail to appreciate the great work done by the Forest Service in conserving and protecting this great wealth. The story of our great forests is something every traveler following the highroads west should know."

The above paragraph refers to an article entitled, "The Eight National Forests of Arizona" by Hollis S. Palmer, Assistant Range Examiner on the Tonto National Forest. The article is illustrated by twenty photographs of the various forest activities.

C. C. C.

CCC OFFICIALS VISIT RO

Colonel John T. Minton of Ft. Bliss, who since January 1 has been District Commander of the CCC in New Mexico, made his first visit to the Regional Office February 13.

John C. Roak, liaison officer for the 8th Corps Area, was also in the office, enroute from a meeting at Cheyenne to his headquarters at Ft. Sam Houston, Texas. They met with E. P. Ancona, CCC Administrative Officer, and discussed administrative matters including CCC training in relation to national defense.

OPEN HOUSE AT SCS-27-N

Blustery weather Sunday, April 6, discouraged the attendance at the open house held at SCS-27-N, just east of the city limits at Albuquerque (this camp houses a detachment of enrollees employed on a Forest Service grazing compilation project for the Regional Office). However, several hundred people visited the camp despite the very high wind. Among the visitors the previous day were Army Air Corps officers from the new Air Base at Albuquerque, and these officers were very commendatory in their comments about the Forest Service short-wave radio equipment on display.

Bob Munro of the Regional Office and George Carr, Forest Service foreman at the camp, installed a very interesting display consisting of a fire map, fuel type map, fire organization map, Osborne fire finder, short-wave radio equipment, emergency rations, pack train equipment, back pack pump, flame thrower, fire tools, and fire prevention posters and literature. Fire detection and control methods were demonstrated or explained by Carr and his enrollees.

FOREST SERVICE FOREMAN COMPLIMENTED

The following paragraph is part of an interesting letter received by a Forest Service foreman from a CCC boy formerly in New Mexico:

"Dear Mr. _____. Sorry that I didn't bid you good-bye when I left. To tell the truth I was afraid that if I did go over and say good-bye that I would start to cry. After $3\frac{1}{2}$ years in the C's, I've worked for many foremen, but you were really the best. I know I'll never forget what you have done for me, while I was in New Mexico. I learned more from you in a year than I learned in my three years of High School. Let me take this time to thank you for everything, and I know I'll never forget my days in New Mexico."

ENROLLEES AT S-27-N HEAR FIRE CONTROL TALK

Allan G. Watkins of the Regional Office recently spoke before the enrollees of S-27-N, located on the outskirts of Albuquerque, on fire control. The talk explained visibility mapping from lookout points, the fire lookout's job, fire weather stations and the fire danger meter. He also explained the co-operative work being done by the U. S. Weather Bureau. About 140 enrollees were present. Enrollment of Camp S-27-N is made up by transfer from various camps throughout New Mexico for training purposes, with some 38 camps being represented.

SAFETY NOTE

An accident occurred in another Region when a tractor was being warmed up and during the warm-up period was being greased and serviced. The motor had been running for some time when the machine suddenly started backwards. The employee greasing the equipment was on the ground at the side of the machine at the time it started, and in arising he accidentally caught his hand between the track and rear sprocket. The employee's helper stopped the tractor as soon as possible but not before the hand had been severed just below the wrist.

Investigation disclosed that the master clutch had been disengaged but the reverse gears were engaged in the transmission. Evidently the vibration of the motor caused the master clutch to become engaged, causing the machine to move backward. Instructions in the manufacturers' instruction books for various types of tractors all contain a statement somewhat as follows under "General Operating Instructions";

"Be sure that the gear shift lever is in neutral position before starting the motor."

ROLLING ROCK CAUSES AN ENROLLEE'S DEATH

On February 6, Sabino Lopez, 18 years old, an enrollee in one of our CCC camps in Arizona, sustained injuries from a rolling rock which led to his death that night.

While he was attempting to escape the rolling rock, it pinned one of his legs against a larger rock. A fracture resulted. After an operation in a hospital, according to the attending physician, embolism caused the enrollee's death.

Investigation showed the rolling rock was dislodged by another enrollee working farther up the hillside.

Since it is absolutely impossible to judge in what direction a rock may roll, under no circumstances should men be permitted to excavate or roll rocks while other men are below them. The danger from this practice should be thoroughly explained at the next safety meeting in all camps and all should be on their guard to see that these instructions are carried out in the field.

INJURIES DECREASED IN NOVEMBER 1940

A decrease in injuries to personnel in Region Three during November 1940 should encourage continued efforts to keep down accidents. The summary of circumstances and causes of injuries sent to the Chief's Office December last showed only one person injured out of 977 employees (including regular personnel, CCC supervisory personnel and WPA workers, but not CCC enrollees). In the single case, a member of the CCC supervisory personnel was injured by striking against an object.

In November, 1939 three persons were injured out of a total of 1,049 workers. There was a total of 149,192 man-hours of work in November of this year as compared to 161,712 man-hours in November, 1939.

FISCAL CONTROL

ALBERT MORRIS BIDS FOND ADIEU TO REGION THREE

After nearly one-third of a century of service to Region Three, Albert Morris, Regional Fiscal Agent, transferred to Boston January 1.

Through a mutual transfer, Mr. Morris became Fiscal Agent of the NEFE. Lawrence P. Wilsey, who has been holding that post, succeeded Mr. Morris here.

The panic of 1873 and the question "Who Kidnapped Charley Ross?" were still live subjects of discussion when according to medical annals of unquestionable veracity, a child was born at Kauffman, Texas, with a checking pencil firmly planted over one ear. The records further disclose that the first words of this precocious youngster (by name Albert Morris) were addressed to the attending physician: "Be sure to submit your bill in triplicate."

Morris came naturally by his future skill in fiscal matters, for his father was a merchant in a rural settlement in North Texas. After acquiring about all the knowledge that country schools could offer, the young man tried his hand at punching cattle, studying at the University of Texas and teaching.

But Destiny, which had ordained him to Government service, placed in his hands one day a teachers' magazine containing an article about forest rangers planting seedlings. It appealed to him, with the eventual result that he entered Government service on February 1, 1906. That was at the Algiers Navy Pay Station near New Orleans, but he soon accepted an offer from the Forest Service and started as a shipping clerk in the Washington Office on April 11, 1906. The Forest Service as it exists today was then one year old.

Gifford Pinchot executed his inspired plan of decentralization, and Albert Morris was one of the group sent from Washington to the newly created District Office at Albuquerque. Of the 60 persons who arrived here on December 5, 1908, he is probably the only one remaining in this Region.

Morris came to "District Three" as a bookkeeper. He became first assistant to the District Fiscal Agent, and succeeded Jno. J. Duffy as District Fiscal Agent on September 17, 1913.

In his 32 years with Region Three, he has seen the Fiscal Agency grow from a staff of six, in one room, to a staff of 20 occupying an entire floor of the "F.A." building in Albuquerque. He has seen pen-and-ink bookkeeping supplanted to a considerable degree by ultra-modern bookkeeping machines.

Looking backward, after more than three decades of wearing the bronze badge, he candidly declared the last years were harder than the first: "The last seven years have been the hardest, due to the load resulting from emergency programs. The emergency programs brought increased appropriations, increased activities throughout the Region, and increased personnel. That meant increased work for the Fiscal Agency."

A tribute to his fellow workers came in a comment on disbursements. Since becoming Regional Fiscal Agent in 1913, Albert Morris disbursed

approximately \$50,000,000. Out of all of that, he has had to pay back to the Treasury from his own pocket, for overpayment or erroneous payments, only about \$50. It wouldn't be nearly that much, either, except for a single item of \$37, an overpayment made to a laborer on the Coconino National Forest in 1920. When the overpayment was discovered, the man was traced to St. Louis, New York and finally Czechoslovakia -- he had gone back to "the old country" and couldn't be located there.

"I've never had any Forest Service member in Region Three refuse to pay back an overpayment which was made to him", said Mr. Morris.

"I attribute the small amount of loss to the quality of the people I have had the privilege of working with. That includes the people in my office, the personnel in the Region, the merchants and laborers and all.

"They're fine folks to know. They'll always have a fond spot in my heart."

L. P. WILSEY, SUCCESSOR TO ALBERT MORRIS

L. P. Wilsey, who succeeded Albert Morris as Regional Fiscal Agent arrived from Boston the latter part of December to take up his duties in the Fiscal Control Division.

Mr. Wilsey, whose unofficial cognomen in Boston was "Larry", has been 11 years in the Forest Service. No stranger to the West, he started on the Pike National Forest in Colorado. After 18 months there he served several years at the Regional Office in Denver as assistant purchasing officer. Then the wave of emergency activity carried him to New Orleans, to remain for 18 months as Fiscal Agent for CCC activity administered by the Forest Service in six Gulf states.

Next came two years in Region Five as fiscal inspector and two years as deputy regional fiscal agent. Nature took a hand and blew down some billions of feet of timber in the New England hurricane. The ill wind blew good for Mr. Wilsey, who served two years as Fiscal Agent for the New England Forest Emergency Project, with headquarters at Boston.

The Wilseys and their two-year-old daughter, Barbara, made the trip to Albuquerque by automobile and arrived in time to spend the holidays in their new home-town.

All the personnel of Region Three extend a hearty welcome to the Wilseys.

FOREST RESERVE FUND COLLECTIONS

The following comparative statement shows the collections for the first half of the Fiscal Years 1940 and 1941:

Classes	1940	1941	Increase or Decrease
<u>Timber</u>			
Sales	\$123,672	\$171,618	\$47,946
Forest Products	694	1,081	387
Settlement	40	--	- 40
Trespass	125	7	- 118
<u>Grazing</u>			
C & H	66,984	83,194	16,210
S & G	14,432	20,033	5,601
Trespass	966	798	- 168
<u>Land</u>			
Special Use	9,270	10,051	781
	\$216,183	\$286,732	\$70,599
Refunds	9	530	571
Net Totals	\$216,174	\$286,202	\$70,028

PIONEER S PAGE

REGION THREE PIONEER DIES IN EAST

Wilbur Reed Mattoon, pioneer in forestry, whose work with what is now the Forest Service started in this region in 1904, died March 4 at his home in Takoma Park, Md. He was 65.

Mattoon, widely known and early leader in farm forestry in the southeastern and Gulf States, began work as a forest assistant in the southwest. He was Supervisor of the old Manzano National Forest when transferred on March 1, 1912 to Washington, D.C. He laid out the first reforestation experimental plots in the South at Summerville, South Carolina in 1912. He was the author of a score of farmer's bulletins on forestry published by the U.S.D.A., many miscellaneous publications and articles, and was co-author of forest tree manuals for 16 states.

According to records Mr. Mattoon's first assignment in Region Three was in 1907 when he was in charge of "nursery and planting work on the Gila Forest Reserve and the Fort Bayard Military Reservation." In 1908 it is believed he was the first chief of Silvics in Region 3, and was Forest Supervisor of the Manzano from about 1909 until 1912. He was well known as a dendrologist.

In about 1907 or 1908 he designed and laid out Highland Park in Albuquerque and did considerable work towards planting small areas around El Tovar at the Grand Canyon in about 1909 or 1910. He was very active in promoting planting experiments both from seeds and transplants in the forest as well as in cities and towns.

While T. S. Woolsey, Jr. was the first forest officer to purchase a home in Albuquerque, Mr. Mattoon was second, where he planted trees and flowers. This was about 1909. This property later changed hands a number of times and was finally purchased by Associate Regional Forester Cheney and is now the home of its present owner, W. E. Wiltbank of the office of Grazing.

During Mr. Mattoon's occupancy of this property, two newly-wed couples occupied apartments on the opposite corner from the Mattoon home. They were Mr. and Mrs. Earle H. Clapp and Mr. and Mrs. Allan S. Peck.

WORD FROM FORMER R-3 MEMBER

Mr. John C. Vandevier, a member of Region Three from 1909 to 1934, now retired, writes that he bought a place in 1935 at 817 E. Sheridan St., Phoenix, Ariz. and that he makes it a point of dropping into Supervisor Kirby's office a couple of times a year for a visit.

Since retiring Mr. Vandevier spent over a year in the Veterans Hospital and in 1939 had a very severe case of pneumonia. His friends will be glad to know that he is now getting along nicely and enjoying life.

FORMER R-3 MAN VISITS RO

Edward N. Kavanaugh, Assistant Chief of the U. S. Grazing Service, in charge of range management, visited the RO sometime ago and renewed acquaintanceships dating back to 1915-17, when he was assistant chief of range management for R-3, under John Kerr.

MR. ALBERT MORRIS GENTLEMAN OF LEISURE

Word has been received from Albert Morris that on March 17 he started his annual leave which will carry him until June 30, at which time his retirement becomes effective. Mr. Morris remained in Boston until the latter part of March visiting historical spots and he then expects to visit in the Carolinas before heading west to his native state of Texas. After a visit there Mr. Morris will return to Albuquerque where he will make his home.

EARLY FOREST WORK IN ARIZONA AND NEW MEXICO

A guest speaker at the dinner, February 22, of the Southwestern Chapter of the Society of American Foresters in Albuquerque, was Judge R. H. Hanna. To many of those present it was not previously known that Judge Hanna had been a "Ranger" on the Prescott and the San Francisco Mountains (now part of the Coconino) "Forest Reserves" shortly after they were created, and while they were administered by the General Land Office, Department of the Interior. The Forest Reserves of the States (then Territories) of Arizona and New Mexico were under the supervision of William Bunton, at Santa Fe, and upon his death I. B. Hanna was made District Superintendent. The speaker, Richard H. Hanna, a son, was sent to the Prescott as Ranger. Protection from fire and poaching were forest activities, and since authority for the expenditure of government funds for fire fighting had to be obtained from Washington, a fire sometimes either gained great headway or burned out entirely before authority could be secured. About 400 fire guards were appointed for the season of greatest fire hazard, and among the first of these selected was John Kerr, who was remembered well because of his outstanding efficiency and dependability. A man whom the speaker enlisted in the work, and of whom he has always been proud, was Leon F. Kneipp, of Prescott, whose name is known as widely as national forestry. Judge Hanna's own choice was to attend a forest school, and make conservation his life work. However, "the best father in the world" had chosen for him a law course, instead, but he now felt that if his two years of forest work had resulted in no other accomplishment, they had been well spent in having interested Mr. Kneipp in the career of a forester. QRC.

TYPE OF OLD TIMER WHO IS FAST DISAPPEARING

When the Forests were created many of the cattle and sheep outfits employed trappers to keep down the loss from predatory animals. At that time the main predators were grizzly bear, wolves (lobos), mountain lion and coyotes. A number of professional trappers followed this work and the usual arrangement was for the livestock outfits to furnish provisions and pay a bounty on each predator caught. The trapper was allowed to keep the hides, after they were checked and marked by the stockmen.

On the headwaters of the Gila and Mimbres Rivers in 1906, there were three trappers employed yearlong: Nat Straw, Hank Hotchkiss and "Bear" Moore. Of these "old-timers" only one, Nat Straw is still living and at the ripe old age of 84, he still has a trap line that he checks on foot. He is living on the Gila River below Cliff, and while the grizzlies have gone the way of the buffalo, he now traps for smaller fur bearing animals, just to have something to do. A little "prospecting" in the surrounding hills is mixed in the day's work occasionally, just to keep himself in good physical condition. And let's see - retirement is possible at what age? R.F.M.

THE MOST DIPLOMATIC RANGER I EVER KNEW

Every forest officer needs to be a diplomat. But the most diplomatic one I ever knew was Pat Fenton. Pat was Irish and was the district ranger at the Grand Canyon for a number of years right after the turn of the century.

In those days there were several small resorts scattered along the Rim of the canyon. The proprietors were all at outs with each other and Pat was frequently called upon to listen to the complaints of these individuals. But Pat played safe by taking sides with no one. In fact, he was so anxious to be strictly fair with all of them that when he rode over to Grand View to spend the night, he would register at one of the two resorts, and stable his horse at the other place in order to show no favoritism.

One day in April 1904, while riding a Rim trail with Pat, we met the proprietor of one of these resorts. After the usual greetings this individual said, "Pat, sit down awhile, I want to tell you a few things." So we dismounted and sat on a log in the woods for about two hours while this resort keeper related his troubles with his competitors.

After about using up our patience he finally "ran down" and no one said anything for a moment or two. Then our "kicker" said, "Pat, what do you advise me to do?" Pat looked thoughtful for a moment, took off his sombrero, looked into it, put it back on his head, and smiling at his questioner said, "Well Mr. _____, I advise you to get used to it".

Without another word we all mounted and rode off, Mr. _____ in one direction, and Pat and I in the other. (By L. A. Barrett, Retired)

MR. BUCKNER DIES

Word was received in the Chief's office of the death of Joel I. Buckner, Regional Fiscal Agent of R-2, which occurred on the last day of December. Mr. Buckner's health had been failing for a year or more and about 5 o'clock Saturday evening, Dec. 28, as he was leaving his home for a walk, he became violently ill and dropped to the floor unconscious. He was hurried to the hospital where it was learned that the immediate cause of his condition was a cerebral hemorrhage. Mr. Buckner's career with the Service began in 1908 on the Pike National Forest and he remained in R-2 continuously until his death, serving as Regional Fiscal Agent since 1922.

(From WO Information Digest)

OFFICE CALLER

Mr. Lewis C. Way called at the Regional Office April 1 to renew acquaintances of a number of years ago. Mr. Way was ranger on the Coronado and Tusayan National Forests from 1910 to 1916 when he resigned to accept a position with the National Park Service. For a number of years he was superintendent of the Rocky Mountain National Park. He now operates a lodge near Colorado Springs during the summer months and spends his winters in the Tucson country.

R.F. RHINEHART VISITS RO

"Rhiney" arrived in Albuquerque January 3, after spending Christmas with his mother in Louin, Miss. Mrs. Rhinehart was 97 years old on December 27. She traveled 100 miles by car on November 5 in order to vote. A clipping from a local newspaper commenting on this was sent to President Roosevelt who wrote Mrs. Rhinehart a letter wishing her many more birthdays. The letter has been framed and is highly prized by Mrs. Rhinehart.

After spending several days in Albuquerque "Rhiney" left for Flagstaff where he resides.

ACQUIRING HISTORICAL MATERIAL

The interest which is being taken on the Carson N.F. in acquiring mementos of early-day forestry is described in a recent Carson Pine Cone. Assistant Supervisor Feight is the author.

"It was a pleasure to have an opportunity a short time ago to review a calendar which Ranger Hodgkin had recently acquired from Oliver Parker of El Rito. It was one put out by the Hallack & Howard Lumber Company in 1916 when the mill was operating at La Madera. There were 12 pages representing each month of the year on which were pictures of various scenes in connection with the operation, such as a closeup of the La Madera plant; a bird's eye view of the plant and yard; one of the logging pond and mill; a virgin stand of timber before cutting and the later logging of the timber; logging with high wheels which were used for a time in the vicinity of Agua Canyon and rarely seen any more except in museums. Another picture depicted a large bank of logs at railroad landing in the woods - a familiar scene during the height of this operation. Another well known scene was the loaded logging train passing through La Madera Canyon box which always afforded a thrill to those on board. The unloading of logs in the pond at the mill and another bank of logs at the landing in the woods ready for shipping, and one of the pond full of logs with logging train in the background. The one affording the greatest thrill of all was the old eight-wheeler loaded with ten logs drawn by two good heavy logging teams with the driver riding the left wheel horse, reminding one that such skimmers as "Shorty" Pinkston are disappearing and that good horse drivers are a thing of the past in these days of truck logging. One of the big Douglas fir trees for which the Carson was noted in those days was shown in another picture and entitled 'A Carload In One Log.'

"During 1916, Oliver Parker was operating a small mill in Potrero Canyon for the H&H Company and his finished product was hauled to a railroad landing located above the box in La Madera Canyon. Mr. Parker has kept the calendar in excellent condition over the 24-year period and he presented it to Ranger Hodgkin for the Vallecitos District files, his only request being that he might review or refer to it if he so wished. The calendar has reached the point where it might well be classified as an antique and recalls many familiar scenes to those who were acquainted with the activity during the time the company was in operation, with Walter Perry, Bill Doherty, Frank Murphy, and A. C. Elmer in charge for the Forest Service and under whom many of us were given short assignments to help out. There is also an enlarged photograph of the La Madera mill, manufacturing plant, lot pond, lumber and railroad yards, of desk blotter size which is kept under glass on the Ranger's desk.

"A little over a year ago, Mr. Hodgkin secured an old saw purchased from Pedro Gurule almost 80 years ago in Denver. Mr. Gurule took a load of wool by ox team overland to Denver where it was marketed and among other things, the saw was purchased and brought to Vallecitos where it was first used to face two sides of the logs used to build one of the first houses constructed in Vallecitos.

"Ranger Hodgkin is to be commended in securing and preserving some of these old antiques. There are, no doubt, many scattered over the Forest that the owners would be glad to present to the Forest Service for their perpetuation. This is something that all Forest officers might direct their attention to before these things disappear and it is too late to acquire them."

FRED MERKLE HANDS OVER THE REINS

Midnight darkness held the snow-covered Zuni country of New Mexico as a Santa Fe train chugged toward the little settlement of Guam, nearly three decades ago. In the light and warmth of a railroad car, the conductor told a cowboy passenger, "We can't stop at Guam, but we'll slow down for you."

Amid the squaling of brake-shoes on wheels, the cowboy's trunk came sailing out and landed in two feet of snow, then was followed by its owner. In a hasty look he saw there was no railway station or any indication of a town, and through his mind flashed the thought that he was the victim of what in those days would be considered "a good joke". He made a dash for the rear end of the train, but in vain.

Thus did Fred Merkle arrive in Region Three, on Feb. 7, 1913. At that moment the new assistant forest ranger of the Zuni National Forest would hardly have believed he was going to remain in the Region and attain the position of Forest Supervisor before retiring on April 1, 1941. But in the lonely, wintry night at Guam, he saw a lantern bobbing up and down the track, and soon received a cordial greeting from E. G. Miller, who was then a district ranger.

The rather primitive quarters Merkle took in the railway section foreman's house perhaps put him in thought of better places he had seen in Oregon, where he was born at Roseburg on April 12, 1879; or in Oklahoma, where his parents had moved to a good-sized farm. The future forester had spent much of his youth on the farm, and gained a great liking for horses and dogs.

Rumor has it that when young Merkle drove into the nearby town, he and his team of horses and his buggy made a smart turn-out and drew all eyes. He made quite a mark at the University of Oklahoma; at least, President Boyd harbored suspicions that Merkle was one of four students who seized him and shaved off half his beard and hair, during a holiday celebration of some kind.

After college, Merkle joined the Remount Service. He liked breaking and handling horses, but didn't relish the Army's rigid ideas. His liking for the outdoors started him in the Forest Service on October 10, 1911, as a forest guard on the Wichita National Forest. Promotion to assistant forest ranger in 1913 sent him to his midnight rendezvous with Ed Miller at Guam, New Mexico.

On the old Manzano-Zuni forest, the one-time cowboy became scaler on the McGaffey timber sale. He stayed with timber management work for the most part, in the twenty-odd years that followed. He served as forest ranger on the Manzano-Zuni until 1918; then scaler on the Santa Fe, Sitgreaves and Coconino to 1923; assistant forest supervisor of the Coconino and the Tusayan, 1924; chief lumberman on the Coconino, 1926 and logging engineer on that forest, 1927.

Merkle joined the Sitgreaves, on June 5, 1935. He was made supervisor on September 20 of that year. On January 16, 1941, he was transferred to the position of supervisor-at-large and went on leave, preparatory to retiring on April 1, 1941.

When Merkle was leaving Oklahoma to enter the Forest Service, he packed his saddle and cowboy outfit in a trunk and tied the trunk with his lasso. He overheard one depot baggageman remark to another, "These big-heeled boys hate to walk and there ain't much riding in this part of Oklahoma any more." Reminiscing a few years ago, Merkle declared, "I wish that bird could see all the footprints I have placed on this malpais country as ranger and timber sale man since I arrived here."

More seriously, he observed, "I have done some hard work and endured hardships, but I do not think that I have done any more for the Service than it has done for me."

When the time came to turn the reins over to F. J. Monighan, his successor as supervisor of the Sitgreaves, Merkle signed a property "voucher" which listed: "1 National Forest, Sitgreaves; with all appurtenances thereto, including contented personnel. Delivered in good working condition this 11th day of January, 1941."

Men who have worked with Fred Merkle, and who thereby hold him in high esteem, would undoubtedly tell you the humorous voucher packed a lot of truth when it referred to "contented personnel" and "good working condition."

LADY LUCK SMILES ON FRED MERKLE

Word has been received that Fred Merkle who retired from the Service April 1, has written a member of the Sitgreaves office that an oil well has been brought in on property owned by him near Maud, Oklahoma and that the Atlantic Refining Company will drill nine more wells on this property. Mr. Merkle is now in Oklahoma looking after his interests there. Fred's many friends are glad to learn of his good fortune.

TWENTY-SIX YEARS AGO

The Williams News of March 20 carried the following in the "Twenty-Six Years Ago" column:

"Climbs 'Bill' on Snowshoes."

"Messrs. Kimball and Deering of the forestry station climbed to the top of Bill Williams last Saturday on snowshoes. They started at 7:00 a.m., spent an hour at the top and reached town at noon. This made but four hours for the trip up and back, which established a record for the trip on snowshoes, and has not often been beaten on a clear trail. They admit that it was a strenuous trip but claim that it was well worth the effort. In some places they found snow fifteen feet deep."

At that time Robert L. Deering was deputy forest supervisor and George W. Kimball was assistant forest ranger of the Tusayan. Today they are Assistant Regional Foresters in charge of Operation in Regions 5 and 3.

We can't help but wonder how much time would be required for these gentlemen to make the trip today.

WORD FROM MRS. JOHN KERR

A letter has been received from Mrs. John Kerr, stating that she has received her copy of the Fourth Quarter number of the Forest Pioneer, which she thoroughly enjoyed. Mrs. Kerr is now located at 527 Harkimer St., Apt. 4, Pasadena, Calif. John Kerr for many years prior to his retirement and death, was Assistant Regional Forester in charge of Grazing.

MISCELLANEOUS

DISEASE ATTACKS ARIZONA CACTI

The picturesque giant cacti of the desert Southwest are imperilled by a destructive bacterial disease, according to Professor James G. Brown of the University of Arizona. The disease has been known for many years, but has only recently begun to take on a serious aspect, possibly because, during the drought years, the lack of rain in Arizona became too serious, even for cactus. The infection causes a wholesale decay and falling off of the great branches of the plant, which finally dies. In some severely attacked areas from a quarter to a third of the giant cacti are already dead. (From Science Service)

HEAVY SNOWS ON RIO GRANDE HEADWATERS

The winter sports bulletin dated April 11 covering Colorado and Wyoming shows that the winter sports area at Wolf Creek Pass on the headwaters of the Rio Grande in the Rio Grande National Forest has 126" of snow. Recent reports covering the Rio Grande drainage indicate that all reservoirs on the upper Rio Grande were either filled or nearly so some weeks ago. This indicates that little or no water will be stored during the period of the spring runoff and if this is true, the Rio Grande will carry a great deal of flood water this spring into the Elephant Butte Reservoir and will tax the capacity of the stream in the vicinity of Albuquerque.

MOISTURE CONDITIONS IN NEW MEXICO ARE GOOD

From all parts of the state come reports that moisture conditions in mountains and plains alike are better than for many years. Almost weekly rains and snows have put an abundance of much needed water in the ground and an unusually large amount of snow in the mountain areas. The prospects for a good season this year are now excellent and it may be expected that trout streams will be good and that lakes will fill with the spring run off.

The winter has been characterized by moderate temperatures and game has for the most part fared pretty well. Yet in some instances coyotes, taking advantage of the deep snows, have played havoc with deer. This has been noted in the Pecos and Jemez Mountains particularly. (New Mexico Magazine, March, 1941 edition)

PLANT FOSSILS IN ARIZONA

Climatic conditions like those in parts of modern Ethiopia prevailed in the American Southwest 170 million years ago, when the long reign of the dinosaurs and their great reptilian kin was just beginning. This is indicated by fossil plant remains in one part of Petrified Forest National Monument in Arizona, of which a study has been made by Dr. Lyman H. Daugherty, of San Jose State College in California.

Dr. Daugherty states that the forests of Arizona in early dinosaurian days (Triassic, to geologists) were dominated by great tree ferns and relatives of modern conifers. Higher flowering plants of the broad-leaved types were not to make their appearance for many millions of years. However, plant evolution was going on quite rapidly, as the saurians lumbered on to the scene.

Presence of tree ferns argues a warmer climate than that of present-day Arizona; it was a warm-temperate or subtropical world. Conifer tree trunks show very sharply marked annual rings, indicating an abundance of rain during part of the year, followed by a severe dry season in which no growth took place. The great size of the petrified logs indicates a climate far better suited for tree growth than is the present climate of the Southwest.

Dr. Daugherty has come to the conclusion that in Triassic Arizona there were moist stream valleys with thick, jungle-like forests, with plateaus between them supporting lower vegetation with scattered trees...

Evidence of forest fires in the ancient woods was found in the form of boat shaped log fragments crusted with fossil charcoal. However, no healed-over fire scars have been found to indicate that trees suffered fire injury while living. (From Science magazine - March 14, 1941)

COTTON HOUSE

A west coast manufacturer, according to the TIMBERMAN, has joined hands with the United States Department of Agriculture to help solve its problem of moving the South's giant cotton surplus. The Speedwall Company of Seattle was selected to build the cotton house, a nation-wide promotion feature of the Department. The firm, using cotton fabric covered Douglas fir plywood for all walls and ceilings, utilizes approximately 4,500 square feet of textile in the demonstration house which is in modified Colonial cottage style, 32 x 24 feet in dimension, with five rooms. Cotton is used in a number of ways as wall covering, insulation, and floor covering. The cotton house is factory built and demountable, similar in specifications and engineering details to the Speedwall house recently given approval by the Public Buildings Administration, which is responsible for the national defense housing projects. The demountable house is a brand new engineering achievement born of the demands of the present emergency and in quality is like nothing hitherto attempted in the building field. Its engineering features have been most carefully scrutinized by a committee of experts representing several government building agencies. Cotton is affixed to the face of the panels by using waterproof synthetic resin adhesive to provide a perfect base for decoration with paint, wallpaper or texture. Such walls can be decorated immediately after erection and they will not crack or check. The cotton also helps provide a better insulation against wind, cold or vapor. Decoration, both on interior and exterior surfaces is done with synthetic resin bound plastic paints, manufactured especially for dry-built construction.

FOREST SERVICE ANNUAL REPORT

Our forests -- occupying one-third of all our land -- are vital to the well-being of the Nation in peace as well as in war, says Earle H. Clapp, acting chief of the Forest Service, in his annual report to the Secretary of Agriculture. Pointing out that land in this country so heavily cut over that it is practically idle represents an area equal in size to Italy, Clapp warned that "abundant natural resources make for democracy and freedom while a scarcity of them may help to pave the way through widespread human misery to despotism and dictatorship...If this Nation is to be strong enough to repel armed invasion and enjoy the fruits of peace, we can no longer permit such floods and accelerated erosion as can be controlled; we can no longer afford to denude forest lands and leave them unproductive; or to continue an annual waste of six billion cubic feet of raw wood." (From the Daily Digest)

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